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Auchenorrhyncha (Hemiptera) of Kyrgyz Grasslands

Цикадовые (Hemiptera) травяных сообществ Киргизии

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КЛЮЧЕВЫЕ СЛОВА: Hemiptera, цикадовые, таксономия, распространение, биогеография.

ABSTRACT. Three month-long entomological expeditions to sample the grassland habitats of the Kyrgyz Republic during 1998-2000 yielded 390 species of Auchenorrhyncha, 99 representing new country records, from 118 localities. Central Asiatic species comprise the largest component of the fauna (43.6%), followed by western Palearctic (35.5%) and Asiatic (9.1%) species. A list of species and localities is provided.

РЕЗЮМЕ. Три энтомологических экспедиции продолжительностью один месяц каждая в течение 1998–2000 годов, предпринятые в Киргизию для изучения травяных сообществ, выявили 390 видов Auchenorrhyncha в 118 местах сбора, в том числе 99 видов впервые отмечены для страны. Бóльшая часть фауны представлена центрально-азиатскими видами (43.6%), далее следуют западно-палеарктические (35.5%) и азиатские (9.1%). Дан список видов с указанием мест сбора.

Introduction

This paper reports some results of recent joint American-Russian-Kyrgyz expeditions to document the insect fauna of the grasslands of Kyrgyzstan. Three month-long expeditions were undertaken in August 1998, June 1999, and July 2000. The main goals of the project were to document the arthropod fauna and associated flora of Kyrgyz grasslands, and to collect specimens of as many species as possible for use in systematic research. Special emphasis was placed on the Auchenorrhyncha (leafhoppers, planthoppers and related Hemiptera) fauna because of its abundance and close association with grassland communities. This paper summarizes data on the diversity and species composition of Auchenorrhyncha in sampled communities of Kyrgyz grasslands and includes a list of collected Auchenorrhyncha species with data on their distributions and biogeographic affinities.

Most of the territory of Kyrgyzstan overlaps the Tien-Shan mountains, which are enormously diverse in climate and habitats, ranging from deserts to alpine meadows depending on elevation and exposure. The complexity of the relief has yielded a high level of endemism in the flora and fauna. The most common landscape in the Tien-Shan is steppe, which occurs at elevations between 1000 and 3300 m, but alpine meadows and cold deserts occur at higher elevations, extensive areas of desert and semi-desert occur below 1800 m, and some coniferous and deciduous forests are present on the northern slopes of some ranges. All of these habitats were sampled as part of the project (Table 1), but emphasis was placed on grasslands. Thus, the checklist presented here will not contain many species restricted to forests or deserts.

Insects were collected from herbs and shrubs by sweeping and by using a gasoline-powered vacuum. Pinned specimens are deposited in the collection of the Illinois Natural History Survey (records online at http://ctap.inhs.uiuc.edu/Insect/search_inhs.asp) and in the collection of the third author. Zoogeographic affiliations were inferred from Nast [1972] and more recent literature. Each species was assigned to one of five categories, based on its known range (Table 2): Central Asiatic [C] including species restricted to Kazakhstan, Kyrgyzstan, Tajikistan and/or Uzbekistan; Asiatic [A], species limited to Asia; West Palearctic [W], including European species and those not ranging east of Central Asia; Palearctic [P] species distributed widely in Eurasia; Holarctic [H], species widely distributed throughout the temperate Northern Hemisphere; and adventive

Table 1. Collecting localities in Kyrgyzstan.
Таблица 1. Места сбора материала в Киргизии.

No	Name	Elev. (m)	Lat. (N)	Long. (E)	Description
1	Kashka-Suu Ravine, ca. 32 km S Bishkek	1759	42.64721	74.51391	Low mountain dry grassland
2	Kashka-Suu Ravine, ca. 34 km S Bishkek	2109	42.63242	74.53927	Forb land w/ shrubs near stream
3	ca. Telek	590	43.10568	74.09451	Desert
4	10 km N Telek	570	43.18094	74.06514	Semi-desert
5	Thon-Aryk (Boz-Peldek Mt.), Bishkek	1080	42.78491	74.57695	Dry mountain steppe
6	Thon-Aryk (Boz-Peldek Mt.), Bishkek	1094	42.78207	74.56982	Dry mountain steppe
7	Kara-Balta Ravine, ca. 20 km N Teo-Ashuu Pass	1889	42.46361	73.8238	Subalpine steppe
8	Teo-Ashuu Pass, N slope	2897	42.37102	73.81262	Alpine meadow
9	Suusamyr Valley, W side Kichi-Korumdy River	2291	42.22436	73.69194	Subalpine meadow near stream
10	Suusamyr Valley, 2 km E Kichi-Korumdy ravine	2352	42.22806	73.70407	Subalpine meadow
11	Otmek Pass, S. slope	3255	42.27853	73.17702	Low alpine meadow
12	E Talas Valley, 1 km S Taldy-Bulak	2103	42.38117	72.9953	Mountain steppe
13	Toktogul Reservoir, S coast	927	41.78179	72.99179	Desert
14	At-Ojnoksky Mt. Ridge, Kurpsaj Ravine	924	41.51523	72.32874	Dry mountain steppe
15	10 km W Dzhalal-Abad	807	40.93239	72.89313	Semi-desert
16	Gultcha Ravine, 50 km SSW Gultcha	2530	39.87143	73.35718	Mountain steppe
17	Taldyk Pass	3615	39.76816	73.16915	Subalpine steppe
18	Karakuldzha, Lajsu Ravine	1815	40.52209	73.61949	Mountain meadow
19	10 km SE Dzhalal-Abad	1004	40.85145	73.10685	Agricultural fields
20	Urumbash Ravine, 10 km NE Arkhangelskoe	1649	41.20707	73.42333	Riparian savanna
21	Urumbash Ravine, 18 km ENE Arkhangelskoe	1900	41.25953	73.57232	Riparian savanna
22	Urumbash Pass	3047	41.28959	73.62537	Mountain steppe and meadow
23	Jct. Kokerim & Kugart Rivers	1247	41.44228	73.95198	Dry steppe and riparian savanna
24	Ak-Mojnok Pass 30 km S Kazarman	2941	41.15132	74.085	Meadow steppe
25	Alabuga River 25 km W Baetovo	1700	41.29648	74.65544	Riparian savanna
26	Dzhaman-Davan River ca. Saz	1826	41.29183	74.70798	Salt desert
27	Between Baetovo & Ugut	1704	41.37156	74.88227	Salt desert
28	Naryn River valley ca. Ak-Tal-Tchat	1688	41.41221	75.0334	Wetland meadow
29	Naryn River valley 5 km W Dostuk	1794	41.40575	75.68722	Wheat fields
30	Kichi-Kara-Kudzhur Ravine, 7 km ESE Dolon Pass	2958	41.82438	75.80164	Sedge meadow
31	SW shore Issyk-Kul Lake 12 km ESE Kara-Koo	1912	42.16044	76.72697	Stone desert
32	7 km W Tosor	1700	42.16096	77.46227	Steppe
33	Terskej-Alatoo Mt. Ridge ca. Barskaun Pass	3750	41.89005	77.70164	Sedge meadow
34	Dzhetimbel Ridge N slope ca. 6km N Suek Pass	3840	41.79821	77.76171	Sedge meadow
35	Terskej-Alatoo Mt. Ridge ca. Barskaun Pass	3800	41.88622	77.72203	Sedge meadow
36	Barskaun Ravine ~16 km S Barskaun	2320	42.04631	77.5978	Meadow steppe, *Picea* forest
37	5 km NNW Karasaj	3530	41.60432	77.88177	Dry mountain steppe
38	5 km W Karasaj	3164	41.56624	77.86397	Dry mountain steppe
39	13 km N Kara Saj	3211	41.64077	77.86052	Alpine meadow
40	S shore Issyk Kul Lake, 10 km E Kadzhi-Saj	1675	42.17593	77.31537	Stone desert
41	Kunur Olen Valley ca. Kel-Ter	1938	42.09757	76.67066	Marsh, sedge meadow
42	Boom Ravine 25 km E Balykchy	1550	42.47066	75.88768	Desert
43	Boom Ravine, Kyz-Kujo	1409	42.64553	75.86548	Riparian woodland
44	Thon-Aryk (Boz-Peldek Mt.), Bishkek	1210	42.78287	74.57158	Desert
47	Otmek Pass, S. slope	3160	42.2677	73.2017	Alpine meadow
48	18 km W Taldy Bulak	1930	42.44196	72.81994	Dry steppe
49	Uch-Koshoy R. bridge ca. Kara-Oy	1640	42.44645	72.75005	Riparian meadow
50	Talas	1320	42.51361	72.27043	Agricultural fields
51	ca. Klyuchevka	1000	42.58752	71.76639	Riparian meadow
52	Kara Buura Ravine 20 km S Kyzyl-Adyr	1300	42.43968	71.55433	Desert
53	Talas Valley ca. Kirov Reservoir	930	42.65529	71.59559	Desert steppe
54	Kara Buura Ravine, N. side	2300	42.2371	71.5415	Meadow steppe
55	Kara Buura Pass, S. side	3100	42.21583	71.57945	Alpine meadow
56	Kara-Kysmak Ravine	2500	42.11362	71.55767	Mountain steppe
57	Kara-Kysmak Ravine	2550	42.13247	71.55596	Subalpine meadow
58	Chatkal Valley, ca. jct. Kara Kysmak & Chatkal R.	2240	42.06653	71.59462	Riparian woodland
59	Chatkal Valley, ca. Aygr-Dzhal	1610	41.73651	71.01274	Streamside vegetation
60	Chandalash R. 6 km N jct Chatkal R.	1630	41.73873	70.87282	Semi-desert
61	Chatkal Valley ca. Besh-Aral	1438	41.70305	70.62501	Semi-desert
62	ca. jct. Ters and Chatkal R.	1390	41.6919	70.70185	Dry steppe
63	ca. Kyzl-Tokoy	1200	41.38824	71.36806	Semi-desert
64	12 km SE Atana	950	41.28983	71.93516	Semi-desert
65	Kurp Saj Ravine	900	41.48333	72.36667	Dry steppe
66	Kurp Saj Ravine	1680	41.57661	72.35306	Subalpine steppe

Table 1. Continue.
Таблица 1. Продолжение

No	Name	Elev. (m)	Lat. (N)	Long. (E)	Description
67	Beke-Chal	960	41.53486	72.49389	Shrub desert
68	ca. Burgondu	570	41.05436	72.25048	Desert
69	8 km SE Aravan	1020	40.49156	72.56342	Semi-desert
70	Kugart R. Canyon ca. Dmitrievka	1300	41.14892	73.29561	Semi-desert
71	5 km E. Kosh Bulak	1820	41.4699	74.41615	Dry steppe
72	Teke-Uyuk Ravine	1910	41.48657	74.5972	Dry steppe
73	Teke-Uyuk Ravine	2300	41.56327	74.66476	Dry *Picea* forest
74	S. slope Moldo-Too Range, E. Kara-Kol Pass	2260	41.50602	74.73651	Subalpine steppe
75	between Kok-Dzhar & Dzhangy-Talap	700	41.42667	74.93506	Desert
76	5 km S Dzhangy-Talap	1640	41.43125	75.03399	Salt desert
77	Karajudzhur R. ca. Sary-Bulak	2300	41.98631	75.71895	Dry steppe
78	S. shore Issyk-Kul, km 61 ca. Kyzyl-Tuu	1780	42.1763	76.70394	Stone desert
79	Barskaun Pass, N. side	3100	41.91875	77.63084	Alpine meadow
80	Taragay R., 13 km N Kara-Saj	3300	41.67772	77.82862	Alpine meadow
81	Ak-Shyrrak Ridge N. Yshtyk	3880	41.69361	78.29456	Steppe
82	Ak-Shyrrak	2950	41.79782	78.66217	Sedge meadow
83	Barskaun Ravine	1890	42.12033	77.59625	Dry steppe
84	Boom Ravine ca. jct. Chuy and Chon-Kemin R.	1380	42.65741	75.88607	Semi-desert
86	Toktogul Reservoir	900	41.77878	72.97196	Semi-desert
87	Gultcha Ravine, Chon-Byuleolyu River	2050	40.17363	73.62294	Mountain steppe
88	Gultcha Ravine, Chon-Byuleolyu River	1981	40.14972	73.56534	Dry steppe
89	Gultcha Ravine, 35 km S Gultcha	2300	39.93926	73.46946	Streamside vegetation
90	Alay Valley, 5 km Taunmurun Pass	3460	39.65833	73.58804	Mountain meadow
91	Alay Valley, E Kok-Suu River	2951	39.67607	73.79735	Streamside vegetation
92	Alay Valley, E Kok-Suu River	3100	39.71407	73.77509	Streamside vegetation
93	Kyzyl-Suu River, ca. Irkeshtam	2838	39.68778	73.91071	Mountain steppe
94	Trans Alay Ridge, 8 km SW Nura	3090	39.60612	73.81005	Wet meadow
95	Alay Valley, Aylyama River	3334	39.68213	73.55048	Alpine meadow
96	Trans Alay Ridge, ca. Bordobo	3523	39.49898	73.26756	Alpine meadow and steppe
98	45 km NE Osh	985	40.71849	73.23237	Desert
99	Urumbash Ravine	1586	41.2085	73.4318	Dry steppe
100	Urumbash River, 18 km SWW Kazarman	1544	41.36693	73.81027	Dry steppe
101	Chartash Mt., Makmal gold mine	2053	41.18253	73.94984	Streamside vegetation
102	At-Bashy, Arpa Valley	2967	40.7745	74.85397	Mountain steppe
103	Arpa Valley	2808	40.79445	74.69369	Mountain steppe
104	Arpa Valley	2832	40.78574	74.71566	Sedge meadow and steppe
105	25 km NEE Karakol	1762	42.5612	78.69514	*Betula* forest, agr. fields
106	Sary-Dzhaz River, 3 km NE jct. Ottuk River	2758	42.26355	79.13807	Sedge meadow and steppe
107	Subboundary Post Echkilitash	2988	42.34691	79.36311	Steppe and meadow
108	Terskej-Alatoo, Turuk-2 Pass	3366	42.40574	79.4082	Subalpine meadow
109	Turgen-Aksu ravine, 40 km NEE Karakol	2071	42.58907	78.88514	Meadow and *Picea* forest
110	W of Karakol, 30 km E Kochkor	2033	42.17484	75.43774	Agricultural fields
111	Dzhumgal-Too Mt. R., Seok River East Ravine	2620	42.2203	75.01539	Steppe and meadow
112	Seok River East Ravine	3075	43.25893	74.79478	Subalpine meadow
113	Tchuy River	1763	42.28678	75.87686	Dry steppe
114	Karafajly-Bulak, 9 km W Ak-Tyuz	2180	42.87963	76.0369	Wet meadow
115	Ca. Ak-Tyuz	2420	42.8896	76.15905	*Picea* forest
116	8 km WSW Ak-Tyuz	1751	42.84214	76.04793	*Betula* forest, streamside veg.
117	9 km WSW Ak-Tyuz	1730	42.86769	76.03776	Streamside vegetation and steppe
118	Ca. Borodaj	1262	42.78186	75.84045	Semi-desert

Nearctic [N]. Species accumulation curves, calculated using EstimateS [Colwell, 2000], were used to assess the completeness of the survey.

Results and Discussion

During the three years of study 118 localities were visited (Table 1, Fig. 1), some multiple times during different years. 618 vacuum and sweep samples of arthropods were taken containing approximately 100 000 insect specimens. More than 40 000 specimens were sorted and preserved in ethanol, and ca. 22 000 of them (mostly Hemiptera, Coleoptera, and Hymenoptera) were mounted and entered into a relational database (see URL above). 390 species of Auchenorrhyncha were found in the samples (Table 2), of which 304 have so far been positively identified, 99 newly recorded from Kyrgyzstan. Two new cicadellid genera and three new species encountered during the project were described previously [Novikov et al., 2005]. Many of the remaining morphospecies may represent undescribed species, some belonging to undescribed genera. Species accu-

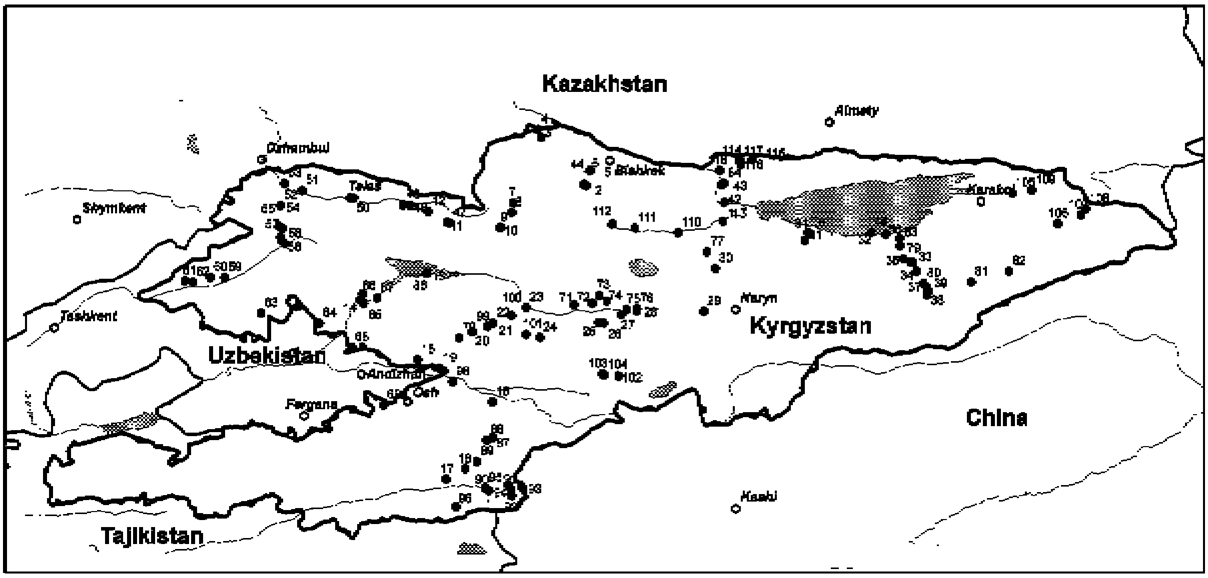


Fig 1. Map showing collecting localities in Kyrgyzstan. Numbers correspond to the site codes in Table 1.
Рис. 1. Карта мест сбора материала в Киргизии. Номера соответствуют номерам мест сбора в Таблице 1.

mulation curves (not shown) incorporating data on actual species observed, as well as four non-parametric estimators calculated from the samples (Chao1, Chao2, ACE, ICE), reached an asymptote [Colwell & Coddington, 1994]. The number of species increased rapidly with the first 150 samples and continued to increase gradually as the number of added samples reached 500, after which a distinct plateau formed. This suggests that further sampling by sweeping and vacuuming in the areas visited during this project is not likely to yield additional species. Zoogeographic affiliations of the positively identified species were as follows: Central Asiatic, 43.6%; western Palearctic, 35.5%; Asiatic, 9.1%; Palearctic, 7.5%; Holarctic, 3.9%. The actual proportion of Central Asiatic species may be higher, because many of the unidentified species are likely to be endemic to the region.

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References

Colwell R.K. 2000. EstimateS. Version 6.0 [Computer program and documentation] // http://viceroy.eeb.uconn.edu/Estimates6.

Colwell R.K. & Coddington J.A. 1994. Estimating terrestrial biodiversity through extrapolation // Philosophical Transactions of the Royal Society of London. Vol.345. P.110–118.

Nast J. 1972. Palaearctic Auchenorrhyncha: an annotated checklist. Warsaw: Polish Scientific Publishers. 550 pp.

Novikov D.V., Anufriev G.A. & Dietrich C.H. 2005. New genera and species of leafhoppers from Kyrgyzstan // Proceedings of the Entomological Society of Washington. Vol.107. P.21–27.

Table 2. Auchenorrhyncha collected in Kyrgyzstan. Species name is followed by zoogeographic association in square brackets (see text; new country records indicated by *), and site numbers where the taxon was collected. Complete collection data may be viewed by searching the online database at http://ctap.inhs.uiuc.edu/Insect/search_inhs.asp.
Таблица 2. Auchenorrhyncha собранные в Киргизии. За видовым названием в квадратных скобках следует зоогеографическая характеристика (смотрите текст; новые указания для страны отмечены *) и номер места сбора. Полная информация по собранному материалу приведена на сайте — http://ctap.inhs.uiuc.edu/Insect/search_inhs.asp.

Fulgoroidea

Caliscelidae

Aphelonema eoa Kusn. [C] 18, 22, 23, 48, 52, 71, 114
Aphelonema scurrilis (Stal) [C*] 25, 53
Aphelonema zonata (Dlab.) [C*] 22, 114
Aphelonema sp. (female) 36
Caliscelis sp. 22, 25, 53, 66
Ommatidiotus dissimilis (Fall.) [C] 6, 43
Ommatidiotus sp. 4, 6, 12, 60, 86

Cixiidae

Hyalesthes obsoletus Sign. [W] 1, 4, 14
Oliarus sp. A 4, 14, 16, 25, 27, 40, 43, 92, 93, 100, 103, 104
Oliarus sp. B 10, 14
Oliarus sp. C 11, 15, 61
Oliarus sp. D 15
Oliarus sp. E 13, 18
Oliarus sp.(female) 60, 84
Pentastiridius sp. A (cf. *leporinus* L.) 13, 14, 23, 61
Pentastiridius sp. B (cf. *leporinus* L.) 16, 40

Reptalus nigronervosus (Kusn.) [C] 14, 23, 70
Tachycixius desertorum (Fieb.) [W*] 13, 15, 18, 36, 100

Delphacidae

Acanthodelphax sp. 108, 115
Asiraca clavicornis (F.) [W] 5, 14, 18, 23, 100
Calligypona reyi (Fieb.) [P*] 28, 100
Chloriona alaica Dub. [C] 18, 20, 21, 22, 49, 52
Chloriona clavata Dlab. [C] 1, 4
Chloriona glaucescens Fieb. [W] 13, 18
Chloriona sicula Mats. [W*] 4, 18
Chloriona superba Em. [C] 13, 18, 20, 21, 49, 60
Chloriona tateyamana Mats. [A*] 36, 59
Chloriona unicolor (H.-S.) [W] 4, 25, 29, 40, 97, 100
Chloriona sp. (female) 18, 23, 42, 49, 100
Clorionidea bromi Em. [C] 1, 6, 9, 18, 54, 60, 62, 74, 87, 100, 114
Delphax sp. 25, 42
Dicranotropis beckeri Fieb. [W*] 12, 13, 18
Dicranotropis divergens Kbm. [W] 9, 30, 36, 114
Dicranotropis hamata (Boh.) [P] 9, 16, 92
Dicranotropis sp. 5, 9, 10, 16, 26, 56, 92
Euides alpina Wagn. [A] 14, 20, 23, 49, 100
Eurybregma nigrolineata Scott [W] 5, 9, 10, 25, 27, 30, 54, 57, 58, 74, 77
Falcotoya minuscula (Horv.) [W*] 3, 4, 13
Florodelphax paryphasma (Flor.) [W] 9, 10
Gravesteiniella boldi (Scott) [W*] 12
Gravesteiniella sp. A 13, 14, 18, 23, 48, 71, 72
Gravesteiniella sp. B 82
Herbalima eforiae (Dlab.) [A] 40, 49
Javesella dubia (Kbm.) [W*] 14, 18, 23, 36, 49, 51, 58, 70, 87, 100
Javesella pellucida (F.) [P] 9, 14, 25, 28, 42, 49, 51, 56, 57, 58, 87, 96, 100, 102, 111
Javesella salina (Hpt.) [P] 77, 82
Javesella sp. (female) 9, 10, 12, 14, 16, 49, 58
Kelisia pallidula (Boh.) [W*] 4, 9, 11, 86
Kelisia perspicillata (Boh.) [P*] 114
Kelisia ribauti Wagn. [W] 20, 49
Kelisia sp. 16, 25, 49, 56, 58, 90, 92, 95, 100
Kusnezoviella dimidiatifrons (Kusn.) [A*] 30, 102
Laodelphax striatellus (Fall.) [P] 1, 3, 4, 5, 13, 14, 15, 18, 22, 28, 36, 40, 51, 53, 83
Megadelphax sordidulus (Stål) 98-10-3 [P] 9, 10, 12, 30, 115
Metropis mayri Fieb. [W*] 17, 18, 25, 48, 54
Metropis tolerans Em. [C*] 60
Metropis ugamicus Mit. [C*] 9
Metropis sp. 10, 74, 114
Muirodelphax aubei (Perr.) [W] 1, 4, 6, 12, 16, 18, 23, 29, 48, 53, 56, 57, 58, 87, 97, 100
Ribautodelphax albostriata (Fieb.) [W] 5, 9, 10, 30, 58, 74, 111
Ribautodelphax altaica Vilb. [C] 30
Ribautodelphax collina (Boh.) [W*] 74, 92, 96
Ribautodelphax ochreata Vilb. [C] 9, 10, 48, 54, 56, 57, 58, 72, 111
Ribautodelphax sp. 16, 23, 30, 35, 60, 74, 92, 102
Sibirodelphax sibirica (Kusn.) [A*] 15, 37, 82, 106
Stenocranus fuscovittatus (Stål) [W*] 1, 4
Stenocranus minutus (F.) [P] 23
Stenocranus sp. 14, 23
Stiromella sp. 60, 100
Toya propinqua (F.) [H] 3, 4, 5, 13, 14, 15, 18, 22
Unkanodes sp. 13, 25, 32, 40, 42
Unkanodes sp.1 63, 67
Unkanodes sp.2 67, 77
Xanthodelphax stramineus (Stål) [W] 31, 58
Genus indet. A 17, 37, 80
Genus indet. B 9
Genus indet. C 9
Genus indet. D 9
Genus indet. E 25, 40, 72
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